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(71) Applicant (for all designated States except US): KONIN-
KLIJKE PHILIPS ELECTRONICS N.V. [NL/NL];
Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): REEFMAN, Derk
[NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven
(NL). HARPE, Pieter, J., A. [NL/NL]; c/o Prof. Holst-
laan 6, NL-5656 AA Eindhoven (NL). JANSSEN, Erwin
[NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven
(NL).

(74) Agent: SLENDERS, Petrus, J., W.; Prof. Holstlaan 6,
NL-5656 AA Eindhoven (NL).

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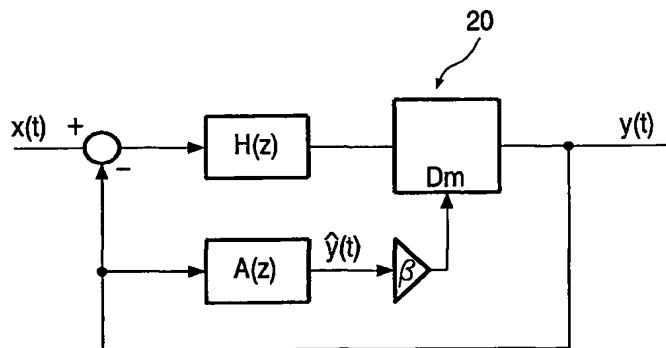
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(54) Title: NOISE-SHAPING DEVICE AND METHOD WITH IMPROVED LOSSLESS COMPRESSION AND GOOD AUDIO
QUALITY FOR HIGH FIDELITY AUDIO



(57) **Abstract:** Improved sigma-delta modulator (SDM) for 1-bit digital audio noise shaping. It is the object to produce a bit stream that is compatible with the Scarlet Book specification (Super Audio CD standard, SACD) and that achieves a higher lossless compression ratio when compressed and decompressed according to the standard. This goal is achieved by using a trellis-based SDM and/or a prediction filter within the SDM that is similar or identical to the prediction filter in the encoder. The trellis SDM is designed to produce a predicted signal from a range of candidate signals that is as close to the input signal as possible.

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